

REMARKS/ARGUMENTS

Claims 21-44 are active. Independent Claim 21 tracks prior Claim 1. Support for cells transformed with at least three different fusion protein genes, each with a different fluorescent protein which comprise a spindle protein is found in the specification on page 7, sections [1] and [4] and in original Claims 1 and 4. Support for Claims 22-44 is found in the disclosure as follows: Claim 22 (Claim 4), Claims 23-38 (page 19, line 18-*et seq.*), Claims 39-40 (page 40, line 9-*et seq.*), and Claims 41-42 (Claims 11-14). Accordingly, the Applicants do not believe that any new matter has been added.

Election/Restriction

The Applicants previously elected Group I, Claims 1-10, directed to cell-division visualized cells. Histone H3, importin α and chromosome and nuclear membrane, were elected as species for examination purposes. New Claim 40 is specifically directed to these species. It is understood that examination will be extended to additional species upon an indication of allowability for a generic claim. New Claims 43-44 generally track non-elected Groups II and III.

Objection-Abstract

The Abstract was objected to as containing two paragraphs instead of one. This rejection is moot in view of the revision of the Abstract.

Objections—Claims

Claims 2, 3, 8 and 9 were objected to as reading on nonelected inventions. The Applicants acknowledge that examination is presently directed to cells expressing fusion protein containing histone H3, importin α and chromosome and nuclear membrane polypeptides. However, upon an indication of allowability for the elected species, they request that examination be extended to additional species falling within generic Claim 21.

Rejection—35 U.S.C. §112, second paragraph

Claims 2-4 and 8-10 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite. These rejections are moot in view of the amendments above.

Rejection—35 U.S.C. §102

Claims 2-4 and 8-10 were rejected under 35 U.S.C. 102(a) as being anticipated by Sugimoto et al., Cell Struc. Func. 27:457-467 (December, 2002). As indicated in the attached Declaration under 37 C.F.R. §1.132, the cited reference is not the work of another and thus not applicable under 35 U.S.C. 102(a). Moreover, this reference was not published more than a year before the present application's filing date and therefore is not applicable under 35 U.S.C. 102(b).

Rejection—35 U.S.C. §102

Claims 1-10 were rejected under 35 U.S.C. 102(b) as being anticipated by Sugimoto et al., Mol. Biol. Cell 13:50a-51a. The copy of the reference supplied by the Examiner indicates a publication date of November 1, 2002 which is more than one year before the present application's filing date.

However, the Applicants disagree that this reference was published before November 24, 2002. As shown by the two attached library receipts, this reference was not received until after November 24, 2002. Moreover, according to the publisher of Molecular Biology of the Cell (Rachel Altemus and Raymond Everngam, Jr.), the issue/ mailing date for the 42nd ASCB Annual Meeting Abstracts was November 27, 2002 (see attached e-mail). Accordingly, this reference would not be prior art under 35 U.S.C. 102(b).

With respect to a potential rejection under 35 U.S.C. 102(a), as indicated in the attached Declaration under 37 C.F.R. §1.132, the cited reference is not the work of another and thus not applicable under 35 U.S.C. 102(a). Accordingly, the Applicants respectfully request that this ground of rejection be withdrawn.

Rejection—35 U.S.C. §102

Claims 1, 2, 4-8 and 10 were rejected under 35 U.S.C. 102(b) over Gerlich et al., Nature Cell. Biol. 13:852. This rejection is moot in view of the cancellation of these claims and would not apply to new independent Claim 21 which requires that at least one of the fusion proteins expressed by the cell comprise a spindle polypeptide.

Gerlich does not disclose cells transformed with fusion proteins containing a spindle polypeptide. Gerlich employs fusion proteins not containing spindle polypeptides: γ -tubulin (a centrosome polypeptide, see page 19, line 21 of the specification), histone H2B (nucleus/chromosome) and LBR (nuclear membrane)—see Fig. 2, legend, on page 853 of Gerlich.

The comparative effects of using or not using a fusion protein comprising a spindle polypeptide are shown in the attached figure. Using the Gerlich cells it is not possible to observe the dynamic state of the spindle during the mitotic period--compare (a-3) to (a-5) with (b-3) to (b-5).

Gerlich's objective is only watching a co-action between nucleus and nuclear membrane, see page 853, col. 2, line 9-*et seq.* Thus, Gerlich does not disclose or suggest a cell expressing a fusion protein that permits visualization of the spindle apparatus. Accordingly, the Applicants respectfully submit that this rejection would not apply to the present claims which are limited to cells expressing fusion proteins containing a spindle polypeptide.

Rejection—35 U.S.C. §103

Claims 1-10 were rejected under 35 U.S.C. 103(a) as being unpatentable over Gerlich et al., Nature Cell. Biol. 13:852, in view of Kimura et al., J.C.Biol. 275:23139, and further in view of Kim et al., J. Biol. Chem. 275:23139. Gerlich has been addressed above and does not disclose or suggest the present invention, which involves a spindle polypeptide.

Kimura was cited as disclosing histone H3 coding sequence and is primarily concerned with the kinetics of core histones. Thus, it too does not suggest the cells of the present invention which contain fusion proteins containing spindle polypeptide moieties.

Kim was cited as teaching a fusion gene comprising importin α and green fluorescent polypeptide (GFP) and is directed to trafficking of p53 into the nucleus and a truncated form of importin A. Thus, it does not suggest the cells of the present invention which contain fusion proteins containing spindle polypeptide moieties. Accordingly, the Applicants submit that this rejection would not apply to the present claims.

CONCLUSION

The Applicants submit that this application is now in condition for allowance in view of the above amendments and remarks. Early notice to that effect is earnestly solicited.

Respectfully submitted,

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